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ABSTRACT

This activity guide was developed in Oregon using the theme of the 150th anniversary of the Oregon Trail to help teachers conduct classroom activities that make use of the skills involved in printing and publishing. It was written by a classroom teacher and designed and published by the printing industry. The guide has the following six purposes: (1) share ideas in the classroom that use skills in printing and publishing; (2) demonstrate practical applications and career emphasis in classroom activities; (3) emphasize a thematic approach to encourage interdisciplinary study; (4) demonstrate the benefits of integrating academic and technical skills with business partnerships; (5) spark teacher creativity by use of these activities in classrooms; and (6) show Oregon teachers how classroom learning might connect with career skills in professions other than printing and publishing. Topics covered in the 11 activities presented in the guide are the following: understanding the printing process; creating a symbol or logo; combining written material with illustrations; how photographs are printed in newspapers and magazines; understanding the color wheel; the price of advertising; interpreting and creating editorial cartoons; the importance of proofreading; copyfitting; designing a poster; and a student newspaper. Each one-page activity consists of two sections: a career connection and a student assignment. (KC)

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PRINTING & PUBLISHING

FROM THE CLASSROOM TO CAREERS

AN ACTIVITY GUIDE FOR TEACHERS

CE069472

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A MESSAGE FROM NORMA PAULUS

Dear Teacher:

Oregon's school reform program, created by the 1991 Legislature, is designed to give this state an educated and trained workforce equal to any in the world by the year 2010.

To do this, we must change how we prepare students by connecting learning to know with learning to do. Students, beginning in the primary grades, need to understand that classroom learning is connected to the world outside.

This activity guide is an example of how the Oregon business community shares this vision. Representatives of printing and publishing—Oregon's fifth largest manufacturing industry—knocked on my door asking if their industry could serve as a model for school reform.

Printing and publishing is an ideal model, because it is a growing and creative industry which has moved from low to high skills and wages. The industry is accessible to nearly every school in Oregon, and it crosses all disciplines. The activities in this guide are tied to the 150th Anniversary of the Oregon Trail.

This guide is an example of how the reform program is moving ahead. It was written by a classroom teacher and designed and published by the printing industry. I thank all who took part in producing it—and you, the teacher—for bringing students face-to-face with printing and publishing.

Norma Paulus

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MAKING A CONNECTION BETWEEN CLASSROOM AND CAREERS

Careers in printing and publishing draw upon English, art, math, computers and business. Showing how these careers relate to what is learned in the classroom is helpful to students.

Nearly every school in Oregon has access to someone in the local community who represents the printing and publishing industry. That person can become a valuable school/business liaison.

PURPOSES OF THIS ACTIVITY GUIDE

- Share ideas in the classroom that use skills in printing and publishing.
- Demonstrate practical applications and career emphasis in classroom activities.
- Emphasize a thematic approach to encourage interdisciplinary study.
- Demonstrate the benefits of integrating academic and technical skills with business partnerships.
- Spark teacher creativity with using these activities in the classroom.
- Show Oregon teachers how classroom learning might connect with career skills in professions other than printing and publishing.

Printers and instructors advise students in the Sabin Skill Center Graphics Technology program. (Photo by Joe Knumm, North Clackamas School District.)

DEVELOPING AN INDUSTRY CONTACT

It is essential that teachers and students have contact with representatives of the printing and publishing industry. Talk with local printers, newspaper persons, graphic artists, and other professionals in the field. For help locating someone in your area, contact the following:

- Pacific Northwest Graphic Arts Education Council, c/o Pacific Printing Industries, (503) 297-3328;
- Northwest Scholastic Press, 737-5676; or
- Oregon Newspaper Publishers' Association, 624-6397.

Elementary and middle school teachers also should network with local high school programs that have a strong career focus in printing and publishing. A high school professional technical program can provide insight to younger students, and might provide the class with an affordable means of printing class projects.

CAREER AWARENESS VS. CAREER TRAINING

Elementary, middle school, and early high school students should develop career awareness through an integration of classroom skills and various career applications. These activities/skills can be a part of the progress toward achievement of the Certificate of Initial Mastery.

Students working toward the Certificate of Advanced Mastery, who have identified a career choice in the printing and publishing industry,

should be involved in an educational strand designed to provide academic and technical training for job placement and continued study. Some high schools offer courses targeted specifically toward careers in printing and publishing. Classes such as printing technology, graphic arts, graphic design, journalism, literary publications, high school newspaper and high school yearbook, should all have a strong career focus. In addition, related courses recommended by industry professionals include classes that emphasize skills in literacy, oral communication, art, computer education, math and business.

THE ACTIVITIES

This booklet suggests a mere fraction of the possible projects and problems creative teachers may choose to develop. Activities are not identified by specific grade level; they are designed to be modified and used for all grade levels by simplifying or enhancing concepts and skills.

Select a theme to encourage interdisciplinary learning such as social, political, environmental or historical events. The theme for this guide is the Oregon Trail and its 150th Anniversary.

THESE SYMBOLS REPRESENT CURRICULUM AREAS:

ART

BUSINESS

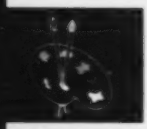
ENGLISH

COMPUTERS

MATH

SOCIAL STUDIES

I. UNDERSTANDING THE PRINTING PROCESS

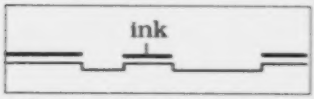


CAREER CONNECTION

The role of the printer or press person: using any type of image transfer technique.

The work of the printer is to reproduce or repeat an image numerous times. The reason for this repetition is so that many people can and do receive the same visual communication or printed message.

The relief method of printing is the one most easily understood. One example is a rubber stamp, where ink is deposited on raised areas of the printing surface.



Side view of a relief printing plate.

ASSIGNMENT

For a classroom relief printing project, students can use a potato, an art gum eraser, linoleum block, or a wood block as the printing plate (depending on student age and ability level). Students can draw an image on the flat surface of the plate, and use cutting tools to carve out the areas of the "plate" they don't want to print.

Students might create a stamp with their initials, or a simple image of self-representation to use in identifying assignments, papers, etc. (Remember that the image on a stamp will print in reverse, so letter forms are to be drawn on the printing plate backward.)

Pioneers on the Oregon Trail left imprints on a "Register Cliff" as a message to others that they had been there.

II. CREATING A SYMBOL OR LOGO

CAREER CONNECTION

The role of the graphic artist. The instructor, or more appropriately, a local graphic artist invited to the class as a guest speaker, discusses symbols, logos, and graphic images and how they are used to represent organizations, businesses, and events.

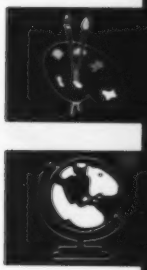
First ask the artist to describe the job generally and show examples of artwork. How does the role of a graphic artist/designer fit into the printing and publishing profession?

Show examples of successful symbols and logos. Explain that the best examples are simple, direct, and a visual image relating to the organization, business or event.

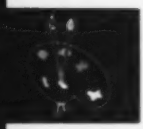
A few examples of symbols

ASSIGNMENT

Students first discuss the visual images that might relate to the Oregon Trail such as a covered wagon, or silhouettes of pioneers or Native Americans. Then have them design a symbol or logo representing the 150th Anniversary of the Oregon Trail.



III. COMBINING WRITTEN MATERIAL WITH ILLUSTRATIONS



CAREER CONNECTION:

The roles of the writer and the graphic artist or illustrator. It is easy to find examples of stories in publications that are enhanced by illustrations. Show examples to students and discuss the different types of illustrations: line drawing, value drawing, painting, etc. Discuss the roles of the writer and the illustrator, and the importance of teamwork and communication to the success of any project requiring the skills of more than one individual.

ASSIGNMENT

Students are to write and illustrate an article on an assigned theme. This could be an article for an Oregon Trail publication, such as a summary of the trail journey, or an instructional manual on how to load a wagon.

Have students create an illustration to accompany the article. The illustration might enhance the overall article content, or help clarify a specific point.

IV. HOW PHOTOGRAPHS ARE PRINTED IN NEWSPAPERS AND MAGAZINES

CAREER CONNECTION

The role of the photographer, camera person, computer scanner operator, or illustrator. Discuss the role of the photographer and the use of photographs to enhance a publication. Show students photos from magazines or newspapers. Use a magnifying glass so that students can see that these photos are composed of tiny black "half tone" dots to create the illusion of grays in a photo when the printing press prints only black ink. Use old screened negatives donated from a local printer that show the dot effect when placed on an overhead projector.

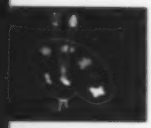
ASSIGNMENT

Closely examine black and white photos in magazines and newspapers to find their "dot patterns." Create the illusion of values by using a "dotting" (stippling) technique with a black felt pen.

Have students develop a value scale with their felt pen including black, white and several shades of gray. Advanced students can look at still life objects (or photos of objects) that might have come from the Oregon Trail or from the native peoples along the route of the trail.

Enlarged section of a screened photograph.

V. UNDERSTANDING THE COLOR WHEEL



CAREER CONNECTION

The role of the printer (ink mixing), or the graphic artist. Full color printed material is developed by combining the three primary colors: red (magenta), yellow, and blue (cyan). Black is added to fill in shadowed areas. This relates directly to a student's understanding of the color wheel, and how all other colors can be made by combinations of the three primary colors.

Ask a local printer to donate an old color key which is a transparency of the four-color inks used for a particular printing job. These color transparencies can be overlapped on the overhead to demonstrate how the primary colors can be mixed to create new colors. The transparencies can also lead to a discussion, by the teacher or a visiting printer, regarding the printing process and how the color separations finally become the finished color picture that is seen in a printed publication.

ASSIGNMENT

Show students examples of full-color printed images (artwork, illustrations, photos), that use easily identifiable colors from the wheel. Have students identify examples of primary and secondary colors. Students should demonstrate how to mix secondary colors: red and yellow = orange, yellow and blue = green, red and blue = violet.

Students can create a painting using four colors, two of which are secondary colors obtained by mixing primaries. Through selection of subject matter, the painting can represent a theme students are studying in class or a place along the Oregon Trail.

VI. THE PRICE OF ADVERTISING

CAREER CONNECTION

The role of the newspaper ad department or private entrepreneur. Discuss with students the various jobs in a newspaper advertising department, i.e., sales and design. Students should understand the importance of advertising as a part of a profitable publication.

ASSIGNMENT

Obtain a copy of a local newspaper ad sheet. This should give the price breakdown for various ad sizes. Have students scan the daily paper for ads. Referring to their copy of the ad cost sheet, students should be able to calculate the newspaper's gross profit for all ad sales in that issue of the paper.

As a more advanced project, students could design an ad for a business and determine the cost of running it by referring to the ad cost sheet. Assuming a 25% net profit on the product advertised, students can calculate the gross dollar amount of sales it will take to pay for the ad.

Students may design their ads to advertise products that pioneers might have needed on their Oregon Trail journey. The ad then could be included in an Oregon Trail publication that is done as a class project.

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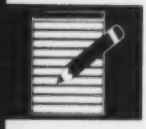
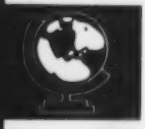
VII. INTERPRETING AND CREATING EDITORIAL CARTOONS





CAREER CONNECTION

The role of the editorial cartoonist. Students learn how drawing, writing, and creative thinking skills are used by the editorial cartoonist to satirize and make social and political comment.

ASSIGNMENT

After students have studied editorial cartoons from various publications, discuss ways in which cartoonists use their art to comment on current local or world events.

Have students select two or three editorial cartoons and write an analysis of the artist's intended message in each cartoon. Have students develop their own editorial cartoons.

Students who are studying the Oregon Trail may be asked to develop an editorial cartoon that comments on people, events, and political issues related to the pioneers' journey.

VIII. THE IMPORTANCE OF PROOFREADING

CAREER CONNECTION

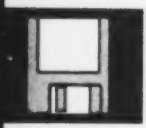
The role of any person writing for publication. Make students aware of the need for perfect mechanics in published writing. Discuss the role of the writer, proofreader, and copy editor in making sure that written information is error free in punctuation and spelling. Printed material must not contain distracting mistakes.

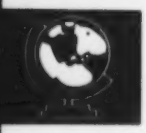
ASSIGNMENT

Students can practice proofreading skills with any written assignment. Writing done for a publication, e.g., a newsletter or newspaper based on a class theme like the Oregon Trail, would be particularly appropriate. Trail themes might include pioneer life, the land, and the cultures of the Native Americans met along the route.

The teacher should discuss techniques for proofreading and copy editing, and demonstrate a few of the most often used proofreading symbols such as delete, insert, close up, spell out. When students finish their writing projects, have them exchange papers and proofread one another's work, using the demonstrated proofreading symbols along with their general copy editing remarks.

IX. COPYFITTING





CAREER CONNECTION

The role of the journalist, writer, and electronic publisher. Discuss the importance of accurately estimating the amount of space an article will require, or the amount of writing it will take to fill a specific space. Copyfitting is important so that a publication can be planned in advance.

ASSIGNMENT

Students may write articles specifically for this assignment, or utilize stories already developed from a class assignment like an Oregon Trail publication.

Show students examples of printed publications that are laid out in columns. Explain that depending on the size of type being used (the actual size of the letters on the page), one line of the column will hold a certain number of characters (actual letters, including punctuation marks and spacing). From a daily newspaper, have students count and record the number of characters in a column line and the number of lines in a column inch. Students should then be able to count all characters in their typed story including letters, punctuation and spacing.

To count characters in a typed column is easier than it sounds. Calculate the maximum number of characters that will fit on a line, and give each line that value minus any unused spaces. You're actually only counting unused spaces. Students divide the total number of characters in their story by the number of characters per line in the daily paper to calculate the number of lines their article would require.

X. DESIGNING A POSTER

CAREER CONNECTION

The role of the graphic artist and the copywriter. Show examples of poster designs. Explain that the purpose of a poster is to communicate information about an activity or event quickly, effectively, and clearly. Discuss the graphic artist's role in creating effective poster designs that communicate the nature of an event and also capture the viewer's interest.

ASSIGNMENT

Have students look at and analyze examples of poster designs to identify the various components: the visual image (drawing, design, or photograph), large type (headlines), and informational type (text). Show students how the various components are arranged in visual blocks to provide unity and guide the viewer through the information.

Have students create posters. The designs may be developed around the Oregon Trail theme. Ideas like "Wagons for Sale," or a poster offering to sell "necessary supplies for the journey," might jog students' creativity.

In addition, many local organizations (humane society, environmental groups) sponsor poster design contests that could be incorporated into this assignment.

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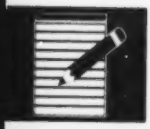
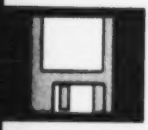
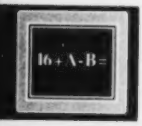
XI. A STUDENT NEWSPAPER







CAREER CONNECTION

The role of the journalist, graphic artist, electronic publisher, printer. The instructor, or a representative from a local newspaper, discusses the stages involved in publishing a daily newspaper: writing (straight news, human interest, editorial), ads and artwork, sections in a newspaper (national/local news, sports, editorial, entertainment), and printing process.

ASSIGNMENT

Students are to develop a class newspaper or newsletter, representative of life at the end of the trail or life of Native American people along the trail. Students write articles, headlines, and plan the layout of their Oregon Trail newspaper. Have examples of newspapers or newsletters that are printed locally.

A RELATED ACTIVITY

A field trip can be taken to the local newspaper to observe how professionals produce a daily newspaper.

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